



U.S. Department
of Transportation
**National Highway
Traffic Safety
Administration**

ODI RESUME

Investigation: PE 05-058
Date Opened: 11/03/2005 Date Closed: 02/24/2006
Principal Investigator: Sonny Murianka
subject: Hood Strut Failure

Manufacturer: Volvo Trucks North America, Inc.
products: Volvo North America Model "VN" Tractors 2001-2003
population: 29383

Problem Description: The hood strut allegedly fails and allows the hood to travel forward onto the person opening it.

FAILURE REPORT SUMMARY

	ODI	Manufacturer	Total
Complaints:	2	4	4
Crashes/Fires:	0	0	0
Injury Incidents:	2	2	2
# Injuries:	2	2	2
Fatality Incidents:	0	0	0
# Fatalities:	0	0	0
Other*:	0	62	62

*Description of Other: Manufacturer Warranty Claims

Action: This Preliminary Evaluation is closed. A safety related defect has not been identified.

Engineer: Sonny Murianka

Date: 02/24/2006

Div. Chief: Richard Boyd

Date: 02/24/2006

Office Dir.: Kathleen C. DeMeter

Date: 02/24/2006

Summary: Volvo reported four field reports and 62 warranty claims related to hood strut failure on the subject truck/tractors. The hood struts are a single acting oil shock that controls the rate of the opening of the hood. There are two struts attached to the hood assembly, one on each side. ODI's concern was that a failed hood strut would allow the hood to drop on one side, possibly injuring someone working on the engine.

In examining the life cycle of hood struts in both truck and passenger car applications, ODI found that all hood struts require periodic replacement due to normal "wear-out." During the investigation, ODI discovered that when the struts were replaced, the problem started to occur on the subject trucks. The failures resulted from the improper installation of the hood strut. This finding was substantiated by fleets contacted from information supplied by Volvo, as well as visits to local dealers.

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During this investigation, ODI performed the following actions:

- a. reviewed warranty/engineering data provided by Volvo;
- b. contacted the two initial complainants to gather more information;
- c. conducted field trips to area dealers to inspect subject vehicles;
- d. contacted two fleets from outside the Washington D.C. area to discuss their experience with these hood struts; and
- e. reviewed the appropriate service manuals.

Based on the data provided by Volvo and the information gathered by ODI, it is apparent that some dealers and owners may have been installing replacement struts incorrectly. Depending on which model truck is being worked on, there are two distinct ways to mount the replacement strut to the frame rails. fleets contacted during this investigation reported no further issues with the struts once proper installation instructions were provided to them from Volvo.

ODI has discussed the matter with Volvo and they have decided to revise the service manuals for these trucks to include pictures of both hood strut mounting arrangements in every service manual, regardless of truck model. Therefore, if someone was using the incorrect manual, they would still be able to view all the possible strut mounting arrangements, regardless of model.

This investigation is closed, as a safety related defect with the hood struts has not been identified at this time. Further use of the agency's resources are not currently warranted. the closing of this investigation does not constitute a finding by NHTSA that no safety-related defect exists. The agency reserves the right to take further action on the vehicles if warranted by new circumstances. ODI will continue to monitor field reports and take appropriate action if indicated.